

IN THE CLAIMS

Please amend the following claims which are pending in the present application:

1. (Currently amended) A method, comprising:

adding a halogen substituted silicon hydride and a nitrogen-containing precursor to a first chamber;

adding the halogen substituted silicon hydride and the nitrogen-containing precursor to an organic solvent in a second chamber coupled to the first chamber;

applying a thermal energy to the halogen substituted silicon hydride and the nitrogen-containing precursor;

setting an operating temperature of the first chamber below 550 °C, and

depositing a silicon nitride layer on a substrate disposed in the first chamber at the operating temperature.

2. (Cancelled)

3. (Currently amended) The method of claim 21, wherein the halogen substituted silicon hydride has the general formula:



where a is an integer less than or equal to three and greater than or equal to one, and

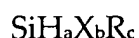
X is a halogen.

4. (Withdrawn) The method of claim 2, wherein the halogen substituted silicon hydride has the general formula;



where X is a halogen.

5. (Withdrawn) The method of claim 2, wherein the halogen substituted silicon hydride has the general formula:



where a is an integer less than or equal to three and greater than or equal to zero,

where b is an integer less than or equal to three and greater than or equal to zero,

where c is an integer less than or equal to three and greater than or equal to zero,

where the sum of a , b , and c is equal to four,

where X is a halogen, and

where R is an alkyl group.

6. (Original) The method of claim 1, wherein adding further comprises reacting a halogen substituted disilicon hydride with a nitrogen source.

7. (Withdrawn) The method of claim 6, wherein the halogen substituted disilicon hydride has the general formula:



where a is less than or equal to five and greater than or equal to one, and

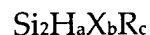
where X is a halogen.

8. (Withdrawn) The method of claim 6, wherein the halogen substituted disilicon hydride has the general formula:



where X is a halogen.

9. (Withdrawn) The method of claim 6, wherein the halogen substituted disilicon hydride has the general formula:



where a is an integer less than or equal to five and greater than or equal to zero,

where b is an integer less than or equal to five and greater than or equal to zero,

where c is an integer less than or equal to five and greater than or equal to zero,

where the sum of a , b , and c is equal to six,

where X is a halogen, and

where R is an alkyl group.

10. (Cancelled)

11. (Withdrawn) The method of claim 10, wherein the silicon source is selected from the group consisting of linear silazanes, branched silazanes, partially substituted aminosilanes with diamene ligands, fully substituted aminosilanes with diamene ligands, silyl cyclopropane, silyl cyclobutane, and halogenated aminosilanes.

12. (Currently amended) The method of claim ~~10~~1, wherein the nitrogen source is selected from the group consisting of dimethyl hydrazine, methyl hydrazine, and asymmetrical dimethyl hydrazine.

13 - 27. (Cancelled)

28. (New) The method of claim 1, wherein the concentration of the silicon precursor is less than or equal to 0.5M and the concentration of the nitrogen precursor is less than or equal to 1.0M.